ecom instruments

mobile experts

Ex-Handy 06

Safety instructions

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Note:
The current safety precautions, operating instructions, EC Declaration of Conformity and the EC type approval test certificate can be downloaded from the relevant product page at www.ecom-ex.com, or alternatively they can be requested directly from the manufacturer.

1. Application

The Ex-Handy 06 is an explosion-shielded, water-, dust- and impact-resistant mobile phone for industrial application in areas with an increased risk of explosion in zones 1, 2, 21 and 22 in accordance with directive 1999/92/EC (ATEX 137) and 94/9/EC (ATEX 95).

2. Safety instructions

These safety instructions contain information and safety regulations which are to be observed without fail for safe operation in the described conditions. Non-observance of this information and these instructions can have serious consequences or it may violate regulations.

Please read these operating instructions carefully before starting to use the unit! In the event of conflicting information the details specified in the safety precautions shall apply.

In case of any doubt (in the form of translation or printing errors) the German version shall apply.

3. Faults and damage

If there is any reason to suspect that the safety of the unit has been impaired, it must be withdrawn from use and removed immediately from the Ex-area. Measures must be taken to prevent it from being restarted accidentally.

The safety of the unit may be compromised, if, for example:
- there is visible damage to the housing.

- the unit has been subjected to excessive loads.
- the unit has been improperly stored.
- the unit has been damaged in transit.
- unit markings or inscriptions are illegible.
- malfunctions occur.
- permitted limit values have been exceeded.

4. Safety regulations

Use of the explosion-proof mobile phone Ex-Handy 06 assumes that the operator complies with conventional safety regulations and has read the certificate in order to eliminate faulty operation of the unit.

The following points are to be observed:

- The unit is to be protected from increased impact.
- The unit should not be opened inside the Ex-area.
- The battery module may not be changed inside the Ex-area!
- The battery module may only be charged outside the Ex-area and only then using the following appropriate chargers:
  battery charger DSA-0051-05C, DSC-6PFA-05 or car charger ALX 20. Data synchronization and charging via USB data cable PCX 20 connected to a commercially digital evaluation device (eg personal computer) tested according to EN 60950.
  The USB signals are specified to Um = 6 V.
- The battery module may only be charged in a temperature range of 0 °C - 45 °C.
- Only accessories approved by ecom instruments GmbH may be used.

- Observe the corresponding laws that are in force in the respective country regarding the use of mobile phones while operating a vehicle!
- Use of the mobile phone in an airplane is not permitted!
- Switch off the mobile phone when in close proximity to medical instruments and if you are requested to do so by corresponding regulations!
- Manufacturers of cardiac pacemakers recommend a minimum distance of 15.3 cm (6“) is maintained between a mobile phone and a pacemaker.
- Do not switch on the mobile phone when the use of such devices is prohibited, as it may cause interference or result in danger.
- Only the original battery module Ex-AMH 06 (Li-Ion 3,7V) should be used!
- The charging socket cover must be firmly engaged in the unit.
- When changing the battery the unit and the battery terminals are to be checked for cleanliness and cleaned, if necessary.
- It must be ensured that the unit is not taken into zones 0 or 20!

5. Ex-Data

Certificate of Conformity no.:	PTB 10 ATEX 2009 X
Ex-designation:	⟨Ex⟩ II 2G Ex ib IIC T4
	⟨Ex⟩ II 2D Ex ibD 21 T130°C

Ex-Handy 06
Approved for zone 1, device group II, explosion group IIC (explosive gases, vapours or mist), temperature class T4.
Approved for zone 21, device group II, dust Ex-atmosphere, max. surface temperature (for surfaces on which dust can develop) +130 °C.

6. Technical specifications

Networks:	
GSM	900 MHz
	1800 MHz
	1900 MHz
Power supply:	Battery module Ex-AMH 06
Dimensions:	119 x 57 x 30 mm
Weight:	approx. 200 g
CE-designation:	CE 0102
Ambient temperature:	-20 °C ... +50 °C
Protection rating:	IP 67

7. SAR certification

When communicating over the wireless network, the mobile phone emits low radio waves known as radio frequency energy or RF. The Specific Absorption Rate or SAR is the unit used to measure the amount of RF energy absorbed by the body while using the phone and is expressed in watts/kilogram. In compliance with the product standards in EN 50360:2001, the allowed limit of SAR averaged for 10g tissue is 2.0 (W/kg). The localised (SAR) of the portable Ex-Handy 06 device has been measured in all cases as requested by the relevant international standards.

The maximum localised SAR value for which the device has been tested and certified for specific exposure limits and different network bands is given below:

Maximum SAR

GSM900 MHz Band

0,663 W/kg Head SAR

DCS1800 MHz Band

0,198 W/kg Head SAR

8. Button functions

Navigation buttons (up/down/left/right)

Volume control

Menu button

Phonebook/ PTT-function

Flashlight disabled for Ex-protection

Left selection button

Right selection button

Accept/Make-call button

On/Off/Call end button

Press and hold to access the mailbox

To activate/ deactivate the loud-speaker during a call. To display the ring type menu in the standby mode.

Press and hold to lock/unlock the keypad.

Press and hold to activate/ deactivate the silent mode.

For entering a ‚+‘ for international numbers

Charging socket cover

9. Rechargeable battery and commissioning

9.1 Changing the battery

The battery module Ex-AMH 06 of the Ex-Handy 06 may only be changed outside the Ex-area. Only those battery modules which are approved by the manufacturer for your device type may be used (see Safety regulations under point 4). Other battery modules may not be taken into the Ex-area.

9.2 Commissioning

1) Inserting the SIM:
Slide the charcoal colored card holder to the right and carefully lift the SIM card holder. Insert the SIM card into the designated holder in the lower part of the phone.

2) Securing the SIM:
Lower the SIM card holder. Slide the card holder gently to the left over the SIM card.

3) Inserting the battery

Insert the battery into the recesses on the lower side of the battery compartment. Then press the battery against the device and turn the screws of the battery clockwise. The screws should only be tightened by hand! The phone should not be connected to the charger if the battery has not been assembled.

4) Charging the phone:

The battery supplied with the phone is not fully charged. It is recommended to charge the phone for three hours before using it for the first time. The full capacity of the battery is reached after 4-6 complete charge/discharge cycles.

IMPORTANT:

To ensure the IP protection rating the screws should only be tightened by hand!

NOTE - There is a risk of explosion if the battery is not exchanged properly or if it is exposed to a flame. Do not short-circuit the battery. The battery does not contain any parts that can be exchanged.

The casing of the battery should not be opened under any circumstances. Only use ecom charging accessories (see point 4).

The use of other chargers or batteries is not permitted. If such items are used, your Ex-protection will expire.
Used batteries are to be disposed of properly.
If you do not intend using the phone for a prolonged period, you should remove the battery.

If the unit is going to be stored for a prolonged period, we recommend checking the battery charge condition at regular intervals in to prevent deep discharge. We strongly advise against connecting your phone to the charger if the battery is not inserted. If the battery is completely discharged, the phone will not switch on and the display will not show a charging process. Connect the phone to the charger. After charging for a few minutes the display will appear again and you can then switch on the phone.

9.3 Safety precautions

Damaged batteries and chargers should be removed from use and sent to ecom instruments GmbH for inspection.

Note:
Extreme temperatures can have an adverse effect on charging the battery module Ex-AMH 06.
Do not dispose of the battery module in a fire!
Do not short-circuit the battery module!
Dispose of the battery module in accordance with local regulations.
Do not dispose of the battery module with normal household waste.

High quality lithium-ion batteries are used in your Ex-Handy 06 . These batteries have numerous advantages in everyday use, such as a low weight and high capacity in a nevertheless compact construction. In addition these batteries also exhibit practically no memory effect.

However, these batteries are susceptible to a natural ageing process which impairs their functionality. Modern batteries today have a lifespan of around 500 charge cycles, which, when used daily, corresponds to a service life of approximately 2 years. The ageing process increases rapidly after this period, which means that the batteries are deemed technically defective after 500 charge cycles. Moreover, the batteries could blow up and cause irreparable damage to your device in a worst case scenario.
For this reason rechargeable batteries with lithium cells should be replaced after 2 years at the latest or after reaching a battery capacity that is 50% of its initial value.

Note: The battery used in this unit poses a fire hazard and can cause chemical injuries if it is used improperly. Neither the battery nor the battery cells should be opened or disassembled and they should not be burned or exposed to temperatures exceeding 100 °C.

10. Repair

Repairs are to be conducted by ecom instruments GmbH or by personnel or service centres authorised by ecom instruments GmbH, because the safety of the unit needs to be tested after repairs are implemented.

11. Cleaning, maintenance and storage

- Only use a suitable cloth or sponge to clean the unit. Do not use any solvents or abrasive cleaning agents when cleaning.
- It is recommended that you have the functionality and accuracy of the unit inspected by the manufacturer every two years.
- If the unit is going to be stored for a prolonged period, remove the battery module from the unit and check its charge condition at regular intervals.
- Do not exceed the permissible storage temperature range of -20 °C ... +50 °C.

12. Disposal

Old electrical devices as well as „historical“ old electrical devices from ecom instruments GmbH are supplied for disposal at our expense and disposed of free of charge in accordance with European Directive 2002/96/EC and the German electrical law of 16/03/2005. The costs associated with returning devices to ecom instruments GmbH are to be borne by the sender.

IIn accordance with “Directive 2006/66/EC on batteries and accumulators and waste batteries” we are obligated to provide you with the following information:
Your device contains a rechargeable lithium battery.
Depleted batteries or rechargeable batteries that can no longer be recharged should never be disposed of along with normal or household waste. Old batteries can contain harmful substances that are hazardous to health and damaging to the environment.
Please return the batteries/rechargeable batteries.

Return is free of charge and required by law. Please only dispose of discharged batteries in the designated containers and tape the terminals of lithium batteries.
The disposal regulations specified above are also applicable for old devices. All batteries and rechargeable batteries can be recycled. Precious raw materials such as iron, zinc and nickel can therefore be reused.

The symbol has the following meaning:
Batteries and rechargeable batteries should not be disposed of along with normal or household waste.

13. Warranty and liability

In accordance with our general terms and conditions ecom instruments GmbH provides a warranty for this product for a period of two years regarding its function and material under the specified and permitted operating and maintenance conditions. This excludes all parts that are subject to wear and tear (e.g. batteries). We provide a 6-month manufacturer‘s warranty especially for the supplied Ex-battery.

This warranty does not extend to products that are used improperly, have been modified, neglected, damaged in accidents or exposed to abnormal operating conditions and inappropriate handling.

Any claims under the warranty can be invoked by returning the defective equipment to the manufacturer. We reserve the right to repair, adjust or exchange the device.

The aforementioned warranty conditions are the sole and only right of the purchaser to compensation, are exclusively valid and replace all other contract or legal warranty obligations. ecom instruments GmbH assumes no liability for special, direct, indirect, accompanying or consequential damage as well as losses including the loss of data, independent of whether it was caused by violation of the warranty obligation, lawful or unlawful action, action in good faith or any other action.

If the limitation of a legal warranty as well as the exclusion or limitation of accompanying or consequential damage is not permissible in certain countries, it may be that the aforementioned limitations and exclusions are not valid for every purchaser. Should any such clause of these warranty conditions be declared ineffective or unenforceable by a competent court, then the effectiveness or enforceability of any of the other conditions of these warranty conditions shall remain unaffected by such a judgement.

14. EC Declaration of Conformity

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Declaration of EC-Conformity
according to directive 94/9/EC (ATEX)

We ecom instruments GmbH, declare under our sole responsibility, that the product to which this declaration relates, is in accordance with the provision of the following standards, directives and norms:

name & adress of manufacturer in the EC	ecom instruments GmbH Industriestraße 2 97959 Assamstadt Germany	
description of device	explosion protected mobile phone type: Ex-Handy 06	
Ex-designation	⟨Ex⟩ II 2 G Ex ib IIC T4 ⟨Ex⟩ II 2 D Ex ibD 21 T130°C	
EC-type examination certificate	PTB 10 ATEX 2009 X	
Certification body	Physikalisch-Technische Bundesanstalt Bundesallee 100 38116 Braunschweig, Germany identification number: 0102	
name & address of auditing body a) Quality Management System according to ISO 9001: 2000	TÜV Süd Management Service GmbH Ridlerstraße 65 80339 München, Germany	
name & address of auditing body b) Quality Management System of production according to directive 94/9/EC (ATEX)	Physikalisch-Technische Bundesanstalt Bundesallee 100 38116 Braunschweig, Germany identification number: 0102	
applied harmonized standards	EN 60079-0 (2006) EN 60079-11 (2007) EN 61241-0 (2006) EN 61241-11 (2006) 3GPP TS 51.010-1 V9.0.0 (2009-12) EN 301 908-1 V3.2.1 (2007-05) EN 301 511 V9.0.2 (2003-03)	ETSI EN 301 489-1 V1.8.1 (2008-04) ETSI EN 301 489-7 V1.3.1 (2005-11) ETSI EN 301 489-17 V1.3.2 (2008-04) EN 50360 (2001-07) EN 62209-1 (2006-03) EN 60950-1 (2006)
applied European directives and recommendations	94/9/EC 1999/5/EC 1999/519/EC	

ecom instruments GmbH
Assamstadt 12.04.2010
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Managing Director

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15. EC type Examination Certificate

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

PTB

EC-TYPE-EXAMINATION CERTIFICATE

(Translation)

(1)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres – Directive 94/9/EC

(3) EC type-examination Certificate Number:

PTB 10 ATEX 3009 X

(4) Equipment: Explosion protected mobile phone type Ex-Handy 09

(5) Manufacturer: ecom instruments GmbH

(6) Address: Industriestraße 2, 67659 Kaiserslautern, Germany

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential assessment and test report PTB Ex 10-25409.

(9) Compliance with the Essential Health and Safety Requirements has been ensured by compliance with:

EN 60079-0:2006, EN 60079-11:2007, EN 61241-0:2006, EN 61241-11:2006

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC type-examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of the equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:

Ex II 2G Ex ia IIC T4 resp. II 2D Ex tiD 21 T130°C

Braunschweig, May 4, 2010

By order

Dr.-Ing. E. Johannsmeyer
Direktor und Professor

sheet 1/2

EC type-examination Certificates without signature and official stamp shall not be valid. The certificate may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt.
In case of dispute, the German text shall prevail.

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Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

(15) # SCHEDULE

(14) ## EC-TYPE-EXAMINATION CERTIFICATE PTB 10 ATEX 3009 X

(15) Description of equipment

The explosion protected mobile phone type Ex-Handy 09 is used for GSM communication in hazardous areas zones 1 and 21.

The permissible ambient temperature range is -20°C to +50°C.

Electrical Data

Supply circuit	from the associated rechargeable battery Li-Ion 3.7V, 1280 mAh type Ex-AMH 09 of the company ecom instruments GmbH, Industriestrasse 2, 67659 Kaiserslautern, Germany
Interface	USB interface U_o = 6 V To charge the battery with the associated charger and for data synchronization (see safety instructions)

The explosion protected mobile phone type Ex-Handy 09 shall be charged outside the hazardous area with the charger fixed in the safety instructions. Only use the rechargeable battery of the type "Ex-AMH 09" (see also safety instructions and warning label).

(16) Assessment and test report: PTB Ex-10-29409

(17) Special conditions for safe use

1. The explosion protected mobile phones type Ex-Handy 09 shall be operated only in such a way that they are protected against excessive impact in the hazardous area.
2. The mobile phones shall be operated in the explosion hazardous area only with the appropriate interface cover in place.

(18) Essential health and safety requirements

met by compliance with the standards mentioned above.

Zertifizierungsstelle Explosionsschutz
By order

Braunschweig, May 4, 2010

Dr.-Ing. U. Johannsmeier
Direktor und Professor

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